

**CLAIMS**

What is claimed is:

1. A method of service discovery, said method comprising:
  - 5 communicating with a source of an application software component, said application software component for performing a service;
  - receiving information descriptive of a status of said application software component; and
  - providing said status in response to a request for said service.
- 10 2. The method of Claim 1 further comprising:
  - issuing to said source a request for said status.
- 15 3. The method of Claim 2 wherein said request for said status is issued automatically at different times.
4. The method of Claim 2 wherein said request for said status is issued automatically in response to said request for said service.
- 20 5. The method of Claim 1 further comprising:
  - receiving said status automatically at different times.
6. The method of Claim 1 further comprising:
  - receiving said status automatically in response to a change in status
- 25 7. The method of Claim 1 further comprising:
  - of said application software component.
8. The method of Claim 1 wherein said application software component can be utilized in a process, wherein said status is checked as said process is set up such that decisions on setting up said process can be made based on service availability.

9. The method of Claim 1 wherein said application software component is utilized in a process, wherein said status is checked as said process is executed such that decisions on executing said process can be made based on service availability.

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10. The method of Claim 1 wherein availability information for said application software component is also provided.

11. The method of Claim 1 wherein performance information for 10 said application software component is also provided.

12. A method of performing a process that utilizes an application software component, said method comprising:

15 identifying a plurality of application software components, each of said application software components having the capability to perform a particular service that is a part of said process;

determining a status of at least a portion of said application software components; and

20 executing said process according to said status such that decisions on executing said process can be made based on service availability.

13. The method of Claim 12 wherein said application software components are stored in one or more repositories accessible by said process via the Internet.

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14. The method of Claim 12 wherein said status is determined prior to said executing.

15. The method of Claim 12 wherein said status is determined as 30 said process is executed.

16. The method of Claim 12 wherein said executing comprises:

selecting from said plurality of application software components a first application software component to perform said service; and

35 taking an alternative course of action when said status indicates that said first application software component is not available.

17. The method of Claim 16 wherein said alternative course of action comprises:

5 selecting a second application software component to perform said service.

18. The method of Claim 16 wherein said alternative course of action comprises:

10 performing a different service in said process, said different service utilizing an application software component different from said first application software component.

19. The method of Claim 16 wherein said alternative course of action comprises:

15 deferring said service until a time when said status indicates that said first application software component is available.

20. The method of Claim 16 wherein said first application software component is also selected according to its historical availability.

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21. The method of Claim 16 wherein said first application software component is also selected according to its predicted performance.

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22. The method of Claim 12 wherein said process comprises a first execution path and a second execution path, wherein said first execution path uses a first set of application software components and said second execution path uses a second set of application software components, wherein said executing comprises:

30 selecting an execution path according to respective statuses of said first set and said second set of application software components.

23. A method of performing a process that utilizes an application software component, said method comprising:

35 identifying services to be provided as part of said process; identifying application software components that are for performing said services;

determining statuses of said application software components;  
deferring execution of a service in said process if application software components for performing said service are unavailable; and queuing deferred services for subsequent execution.

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24. The method of Claim 23 wherein said application software components are stored in one or more repositories accessible by said process via the Internet.

10 25. The method of Claim 23 wherein said statuses are determined prior to execution of said service, wherein execution of said service is not begun until said application software components are available.

15 26. The method of Claim 23 wherein execution of said process is deferred if execution of a service in said process is deferred.

27. The method of Claim 23 wherein said statuses are determined as said process is executed, wherein further execution of said process is deferred.

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28. The method of Claim 23 wherein said process comprises multiple execution paths, said execution paths using different combinations of application software components, wherein said deferring comprises:  
deferring execution of an execution path until said statuses indicate that application software components used by said execution path are available while executing those execution paths that use application software components that are indicated as being available.